Bureau of Air Quality
Construction Permit Application
Part IIB: Process Source
Instructions

PURPOSE:

To obtain the information needed to process applications for air permits and to maintain these permits. The information requested is used to determine whether a source must meet State and/or Federal Regulations and if the source is capable of achieving the applicable standards.

EXPLANATION AND DEFINITION:

Any person who plans to construct, alter or add to a source of air contaminants, including installation of any device for the control of air contaminant discharges, shall first obtain a construction permit from the Department prior to commencement of construction. In order to obtain a permit, the source must first complete and submit a permit application form.

Use Form Part IIB for any process source engaged in the manufacture, processing, handling, treatment, forming, storing or any other action upon materials except fuel burning operations, incinerators, or asphalt plants. One form can be used for all equipment included in a process source or if more appropriate, a separate form can be used for different pieces of equipment. If separate forms are used for the same process source, explain this in the process description below.

Use Form Part IIA for a fuel burning operation which is defined as "use of furnace, boiler, device or mechanism used principally but not exclusively to burn any fuel for the purpose of indirect heating." Dryers, kilns, tenter frames, etc., are usually not considered fuel burning sources, but are considered processes (Part IIB application).

GENERAL INSTRUCTIONS:

Unless designated as optional, all blanks on application form(s) must be completed for the application to be considered complete, along with necessary requested information on the item by item instructions below. Incomplete applications will not be processed. Attach additional sheets as necessary.

Type or Print using ink to complete form, NO PENCIL PLEASE. When filling out on the computer, use only the tab key to move your cursor. Do NOT use the Return/Enter key to move your cursor.

ITEM BY ITEM INSTRUCTIONS:

1. Process Source Information

Unit ID: If modifying an existing Unit ID, list the applicable ID number here. If this is a new installation, leave this item blank, and a Unit ID will be assigned by the Bureau. The Emission Unit ID should be numeric characters (01, 02, etc.).

Permit Number: The existing South Carolina Air Permit Number. If the facility is new or does not currently have a South Carolina Air Permit Number, leave this item blank. A number will be assigned by the Bureau.

File Name: For electronic copies of the permit application, please fill in the name of the file containing this form. Please limit the file name to sixteen (16) characters (excluding file extension such as .doc, etc.).

Check all that apply: Construct a New process that will not be part of an existing source (this equipment is a completely new process) OR Alter an existing source (adding new equipment to any existing process, replace existing equipment and specify equipment replaced, other change to existing process).

Description of New or Modified Process/Equipment: Description of overall process (if new) and changes from this project (if existing).

Process Description: Define the process including all applicable process boundaries. The determination of what equipment and/or processes should be grouped together is discussed in a guidance document that can be found at http://www.scdhec.net/eqc/baq/pubs/STD4guidance.pdf or you may contact your permit writer for clarification.

Does the unit combust a waste as defined in SC Reg. 61-62.1? If yes, which waste streams? If the facility combusts any waste (solid, liquid or gaseous) in any amount or for any reason, list all wastes appropriately. If the facility does combust a waste stream, submit a waste analysis as required by SC Regulation 61-62.5, Standard 3, Section V for each waste stream.

Is this unit equipped with a control device? Is yes, please complete page 3 of the form. See Instruction in Section 9 of this document.

2. Raw Material Data (Attach additional sheets as necessary)

Process Weight Rate: If the facility wishes, the Department will determine how the process weight rate should be determined. The determination of what equipment and/or processes should be grouped together is discussed in a guidance document that can be found at http://www.scdhec.net/eqc/baq/pubs/STD4guidance.pdf or you may contact your permit writer for clarification. Process weight is defined as "The total weight of all materials introduced into a source operation, including air and water where these materials become an integral part of the product, and solids used as fuels but excluding liquids and gases used solely as fuels." (SC Regulation 61-62.1 Section I). The process weight rate is also defined in SC Regulation 61-62.1, Section I for different types of processes. The process weight rate should be determined in the units of tons per hour.

Material: The raw materials. List all raw materials used in the total process. Major raw materials are those which comprise 10% or more of the total process raw materials. Other raw materials must be listed if they are a regulated pollutant or contribute to the formation of a regulated pollutant.

Maximum Quantity Used: The annual throughput for the facility processes (i.e., major raw materials are those which comprise 10% or more of the total process raw materials). (Indicate units)

3. Product Data (Attach additional sheets as necessary)

Products: The product of the emission unit.

Production at Maximum Rated Capacity: The maximum production rate of the emission unit product. This will be the production rate at which the emission unit will be permitted to operate. For confidential production rate information, please indicate accordingly with a statement, "information contained in confidential application."

4. New or Altered Process Source(s)

Process/Equip ID: The equipment identification (tag number) for each new or altered process source. Each piece of equipment should have its own unique ID (alpha-numeric). This is an ID designated by the facility, such as B1 for Boiler #1 or TANK1 for Tank #1. This ID number should be carried throughout the application whenever Equip ID is requested.

Equipment Description: The general name used to identify each new or altered process source. List each new or altered process source individually. Do not list the facility control equipment in this section. This designation should be used throughout the application whenever the equipment is requested. Describe the equipment including the make and model of the equipment, if applicable. Each new or altered process source should be on a separate line. An example of a description would be a powder coat paint booth to paint 75 widgets per hour.

Design Capacity: Design capacity of equipment in relative units.

Normal Operating Throughput Rate: Operating maximum throughput of process in relative units.

Control Device ID: The control equipment identification (tag number) for each piece of equipment. Each piece of equipment should have its own unique ID (alpha-numeric). This is designated by the facility and is not necessarily a permit ID number. This ID number should be carried throughout the application whenever Control Device ID is requested.

Stack/Exhaust ID: Each point where a pollutant may exhaust at the facility shall be identified with a unique number or label. Please use the same Stack/Exhaust ID that is used in your current air dispersion modeling scenario, if applicable. This ID number should be carried throughout the application whenever Stack/Exhaust ID is requested.

5. New or Altered Fuel Burning Source(s) (if using a New or Altered indirect heat source, you will need to also fill out a Part IIA form)

Indirect/Direct Heating: State whether the unit uses indirect or direct heating. In direct heating, the combustion and process gases intermingle. In indirect heating, the combustion and process gases do not intermingle.

Total Rated Heat Input: Maximum rated input capacity in BTU/hr.

Number of Burners: List number of burners in the fuel burning device.

Size of each burner: List the size of each burner in the fuel burning device.

Burner Type: List type of burner if burning solid waste.

Equipped with a Low NOx burner/which fuels: State whether the unit is equipped with Low NOx burners and which fuels the burners are used with.

6. Fuel Data

Fuel Type and Grade: List type of fuels combusted and grades (e.g. Natural gas, No. 2 fuel oil, B20).

BTU Content: List heat capacity of each fuel (BTU/lb, BTU/gal, etc.).

% Sulfur by weight: List maximum % sulfur allowed in the fuel type and grade as applicable.

% Ash by weight: List maximum % ash allowed in the fuel type and grade as applicable.

Consumption @ Maximum Rated Capacity: List quantity of fuel combusted at maximum capacity.

7. Emission Rates at Maximum Capacity

Pollutant: List the pollutant name for which the emissions are calculated for each new or altered source (both process and fuel burning sources). List a separate line for total VOC and PM – and then speciate the emissions for any Hazardous Air Pollutant (HAP), Toxic Air Pollutant (TAP). The list of HAPs can be found in Section 112(b) of the Clean Air Act Amendments of 1990, TAPs can be found in SC Regulation 61-62.5, Standard 8 or contact your permit writer who can detail all of the different pollutants.

CAS Number: List the appropriate CAS Number.

HAP, TAP or Both: State whether pollutant is a HAP or TAP pollutant. If the pollutant is a criteria pollutant, mark N/A. Attach additional sheets as necessary.

Uncontrolled: List the maximum emissions from this process source with no limitations (without controls and operating at design capacity) tons per year.

Maximum Controlled: List the maximum emissions from this process source as designed with control equipment operating and/or federal enforceable limits in tons per year. It should be clear in the attached calculations if the

maximum controlled emissions are from control devices, operational limits, and/or both.

Calculation Method: State the method of which emissions were calculated (i.e. AP-42, Engineering Calculations, Material Balance). Attach an example of each calculation and information for the Bureau to verify the emission calculations.

8. Operating Schedule Information: Indicate operating schedule including normal operation and seasonal variation.

9. Control Device Information (If the process does not have a control device, this page is not necessary)

Fill out the form with the control device as the primary, secondary or other as applicable. Attach additional sheets as necessary.

Control Device ID: The control equipment identification (tag number) for each piece of equipment. Each piece of equipment should have its own unique ID (alpha-numeric). This is designated by the facility and is not necessarily a permit ID number.

Stack/Exhaust ID: Each point where a pollutant may exhaust at the facility shall be identified with a unique number or label. Please use the same Exhaust Pt ID that is used in your current air dispersion modeling scenario, if applicable.

Manufacturer Make and Model: List make and model of the control device.

Type of Device: List type of control device (e.g. baghouse, ESP, fabric filter, Thermal Oxidizer, flare, Wet Scrubber)

Inherent to the Process: Discuss whether the control device is inherent to the process. If so, explain.

Pollutants Controlled: Check the boxes as appropriate for all pollutants controlled. If the unit controls more than one type of pollutant, check all that apply. If the pollutant is not listed, check Other and list pollutants.

Projected Capture Efficiency: State the efficiency of capture system or what percentage of the emissions from the process enters the control equipment.

Destruction, Control, or Removal Efficiency: State the removal or destruction efficiency of control system.

Engineering Design and Operating Characteristics: Description should also include type of bags, number of compartments, type of regeneration etc as applicable or other design characteristics as applicable.

Manufacturer's Specifications and Ratings: Include manufacturer's specifications and ratings.

Recommended Control Device Monitoring/Data Collection: List each parameter being monitored or data that is collected to ensure proper operation of the control equipment. Also list any preventive maintenance and inspections for the control equipment if appropriate.

Recordkeeping: List recordkeeping necessary to ensure that appropriate monitoring is done including frequency of the recordkeeping and reporting of the information if applicable.

OFFICE MECHANICS AND FILING:

This form may be photocopied for future use.

In accordance with retention schedule HEC-AQC-3 break file at the end of each fiscal year, retain within the Agency for five additional years and then destroy.